1: Pulm Pharmacol. 1995 Dec;8(6):259-65.

A comparison of a new mucolytic N-acetylcysteine L-lysinate wi acetylcysteine: airway epithelial function and mucus changes in

Tomkiewicz RP, App EM, De Sanctis GT, Coffiner M, Maes P, Rubin B M.

Pulmonary Research Group, University of Alberta, Edmonton, Canada.

A newly synthesized mucolytic agent, N-acetylcysteine L-lysinate (Nacystel studied. Tracheal mucus velocity (TMV), transepithelial potential difference rheological properties, and ion content of collected airway secretions were ev in six healthy mongrel dogs after placebo, Nacystelyn (NAL) and acetylcyste (NAC) metered dose inhaler (MDI) aerosols. Although TMV was increased a viscoelasticity decreased after both treatments, the treatment effect with NAI significantly greater. Furthermore, NAL increased the negative PD and Cl- c secretions in the trachea, an effect not observed after NAC. Both compounds increased ciliary beat frequency (CBF) on the frog palate at a concentration r similar to that approximated in dog airways. The increased mucociliary clear could be partially explained by favourable rheological changes combined wit stimulation of CBF. Since both compounds break disulfide bonds in mucus p the greater change in mucus rheology and clearance rate after NAL, without water content, could be explained by the increase in Cl- content. Nacystelyn to combine different modes of action which synergistically cause an increase clearance rate of airway secretions.

PMID: 8819180 [PubMed - indexed for MEDLINE]